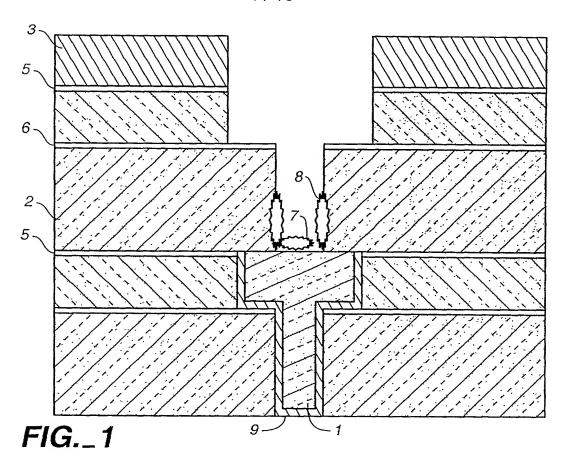
Damascene System

Inventor(s): Catherine M. Payne, et al. Atty. Docket No.: 008317-0123-999

1/13



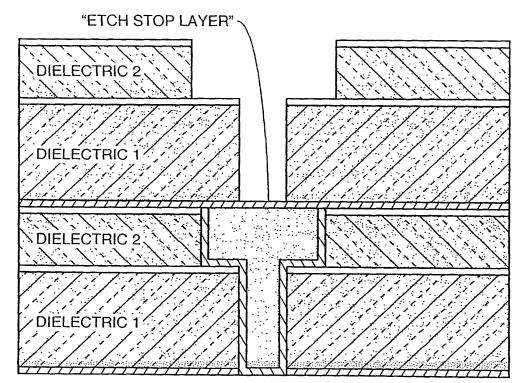


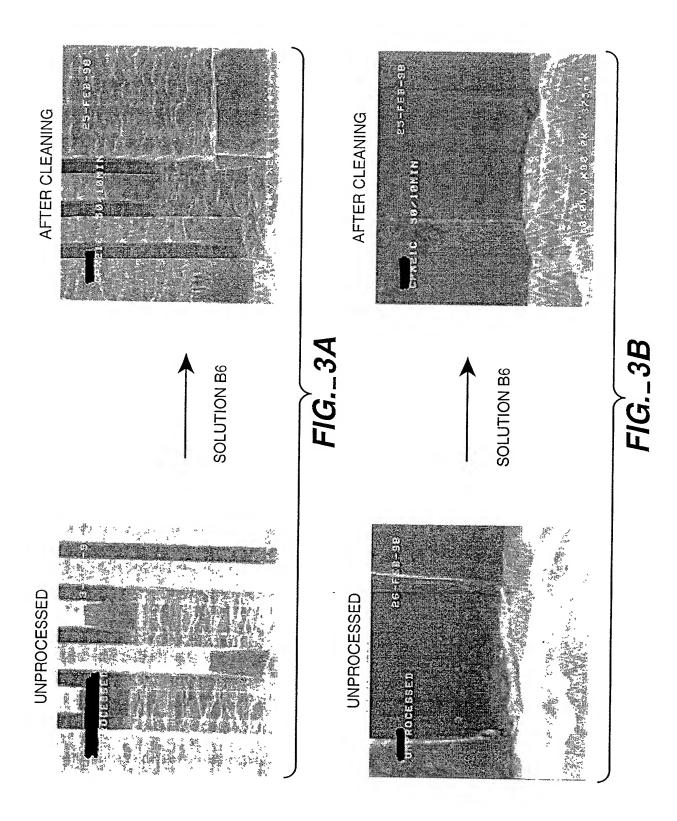
FIG.\_2

The state of the s

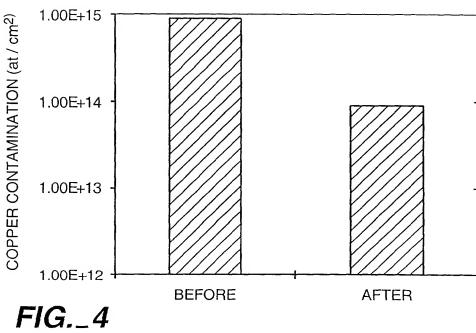
Damascene System

Inventor(s): Catherine M. Payne, et al. Atty. Docket No.: 008317-0123-999

2/13



Inventor(s): Catherine M. Payne, et al. Atty. Docket No.: 008317-0123-999



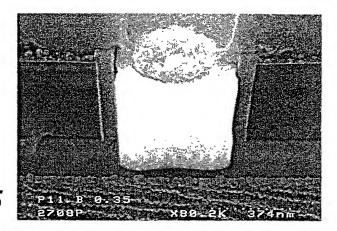


FIG.\_5

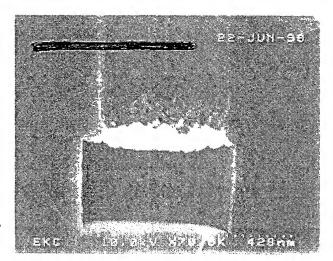
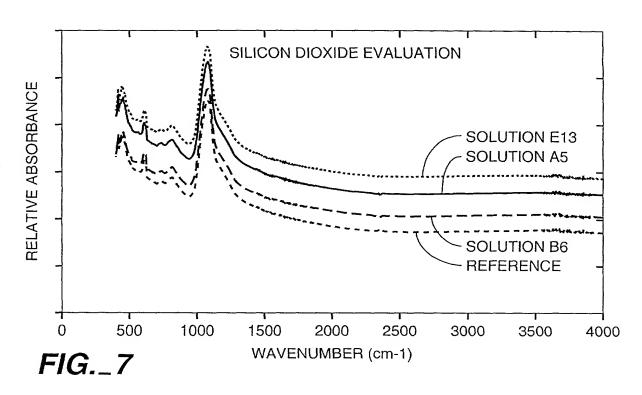
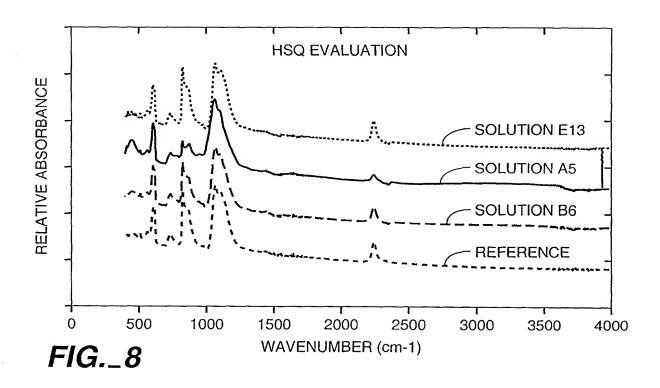


FIG.\_6

Damascene System Inventor(s): Catherine M. Payne, et al.

Atty. Docket No.: 008317-0123-999



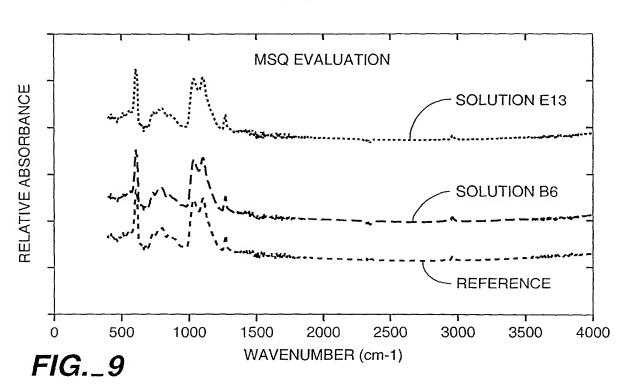


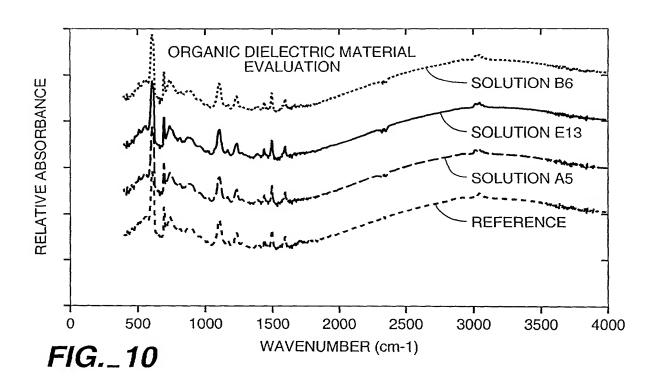
Damascene System

Inventor(s): Catherine M. Payne, et al. Atty. Docket No.: 008317-0123-999









Damascene System Inventor(s): Catherine M. Payne, et al.

Atty. Docket No.: 008317-0123-999



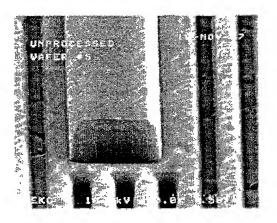


FIG.\_11

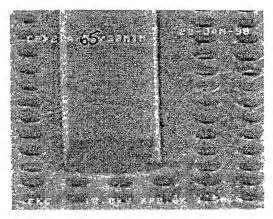


FIG.\_12

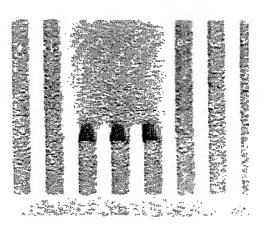


FIG.\_13

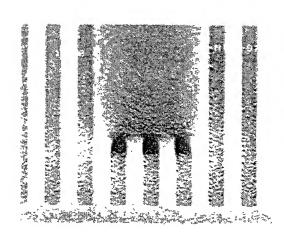


FIG.\_14

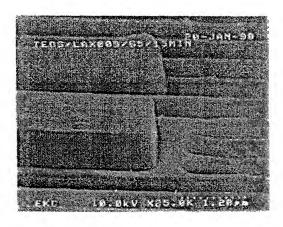


FIG.\_15

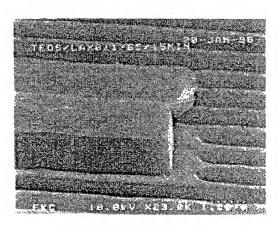


FIG.\_16

Damascene System

Inventor(s): Catherine M. Payne, et al. Atty. Docket No.: 008317-0123-999

7/13

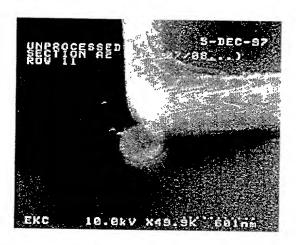


FIG.\_17

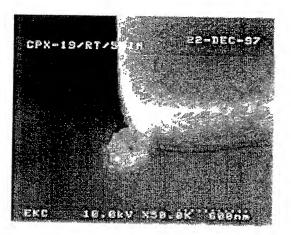


FIG.\_18

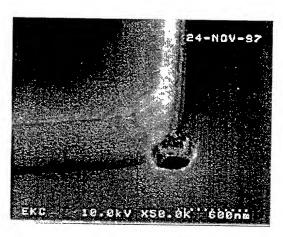


FIG.\_19

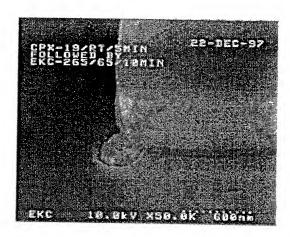


FIG.\_20

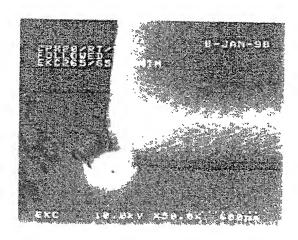


FIG.\_21

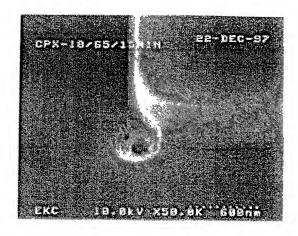
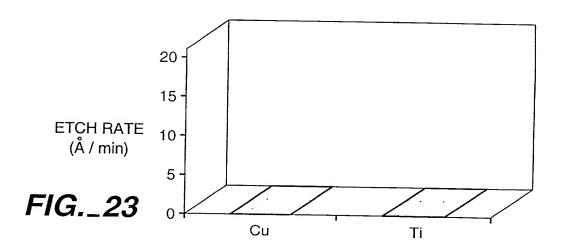
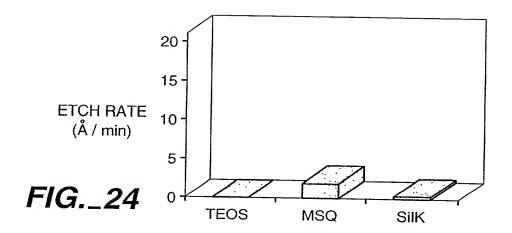


FIG.\_22

Damascene System

Inventor(s): Catherine M. Payne, et al. Atty. Docket No.: 008317-0123-999





A THE RESERVE THE THE PARTY OF THE PARTY OF

am la

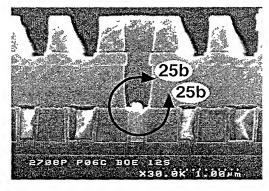


FIG.\_25a

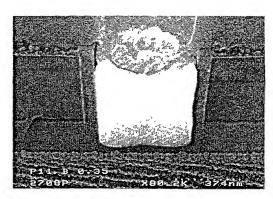


FIG.\_25b

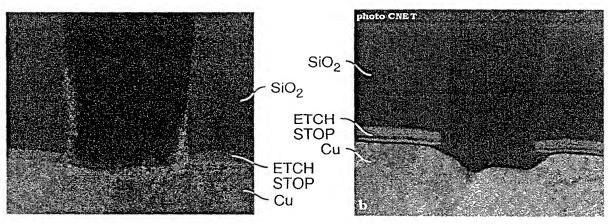


FIG.\_26

FIG.\_27

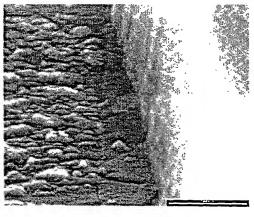


FIG.\_28

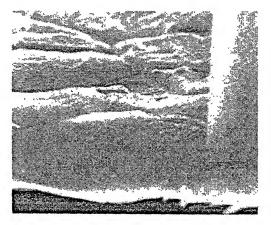


FIG.\_29

+

Damascene System

Inventor(s): Catherine M. Payne, et al. Atty. Docket No.: 008317-0123-999

10/13



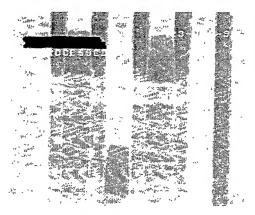


FIG.\_30

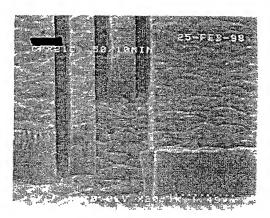


FIG.\_31

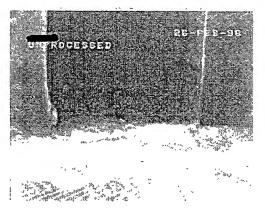


FIG.\_32

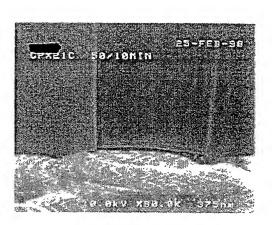


FIG.\_33



FIG.\_36

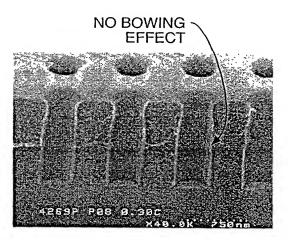
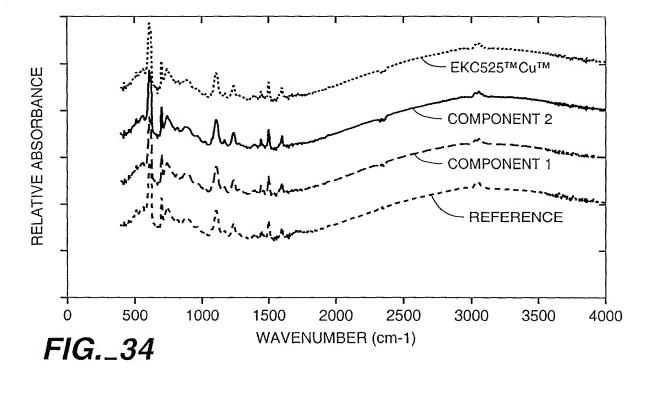


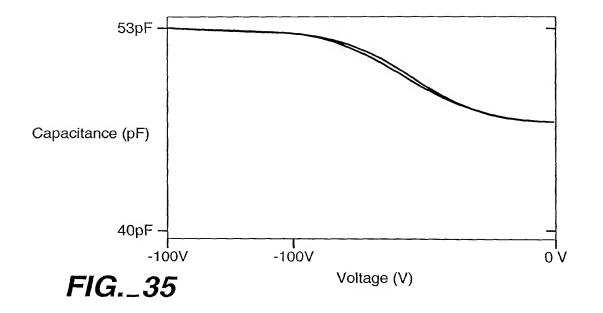
FIG.\_37

+

Damascene System

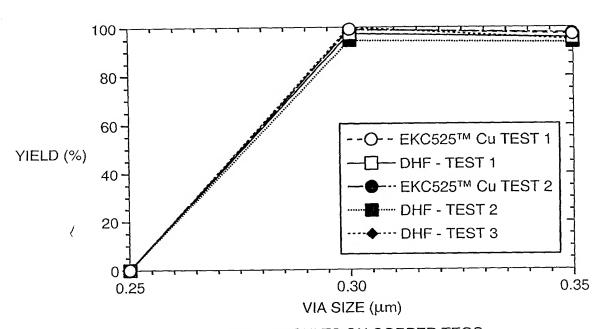
Inventor(s): Catherine M. Payne, et al. Atty. Docket No.: 008317-0123-999





Damascene System

Inventor(s): Catherine M. Payne, et al. Atty. Docket No.: 008317-0123-999



YIELD RESULTS ON COPPER TEOS STRUCTURE VERSUS VIA SIZE FIG.\_38 COMPARING DHF AND CLEANING SOLUTION

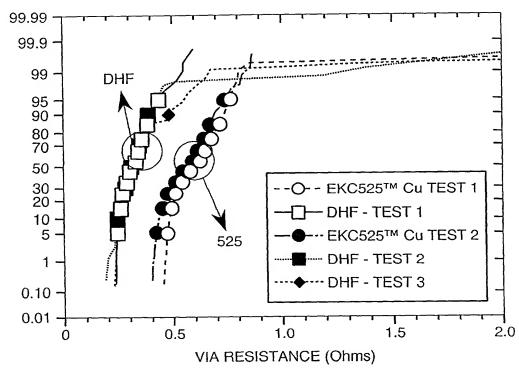
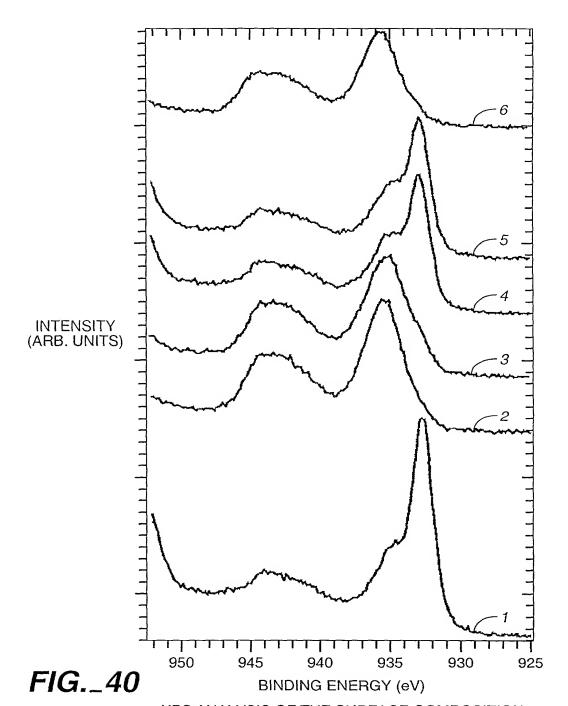


FIG.\_39 VIA RESISTANCE HISTOGRAM FOR 0.3 µm VIAS COMPARING DHF AND CLEANING SOLUTION

Damascene System

Inventor(s): Catherine M. Payne, et al. Atty. Docket No.: 008317-0123-999



XPS ANALYSIS OF THE SURFACE COMPOSITION OF A COPPER BLANKET BEFORE (1), AFTER ETCHING (2 AND 3) AND AFTER CLEANING IN THE SOLUTION (4 AND 5) AND IN SOLUTION B8 (6).